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A61M 11/04

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A5T TBE

(56) Documents Cited
GB 1587847 A GB 1489585 A GB 1030772 A

(58) Field of Search
UK CL (Edition L) A5T TBA TBC TBD TBE TDC TDP TEB
INT CL[5] A61M, A62B
ONLINE DATABASES : WPI

(54) Dust proof inhaler

(57) The new Industrial Dust Proof Inhaler is an invention to add to the existing Inhaler to make it more efficient for use in dirty and dusty climates. Although the medical practicality remains unaltered, it has been improved. The new Dust Proof Industrial Inhaler does not effect the function of the basic Inhaler and will not impair or obstruct its medical properties.

The new Industrial Inhaler is an improvement by means of press down caps 10, thumb and finger grips 11, foam dust stops 12, 21 to prevent entry of dust, anti dust slip slopes 13, to allow dust that may have penetrated to slip out of the Inhaler, snap on cap 15 and antiloose strap 16. The inhaler includes a location 17 for a logo.

The new Industrial Inhaler remains a disposable item.

FIG 1.

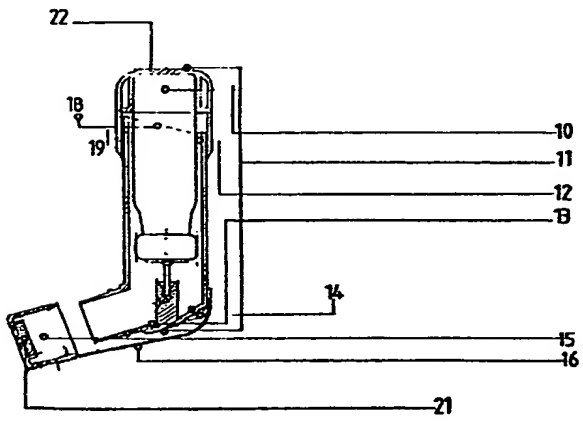
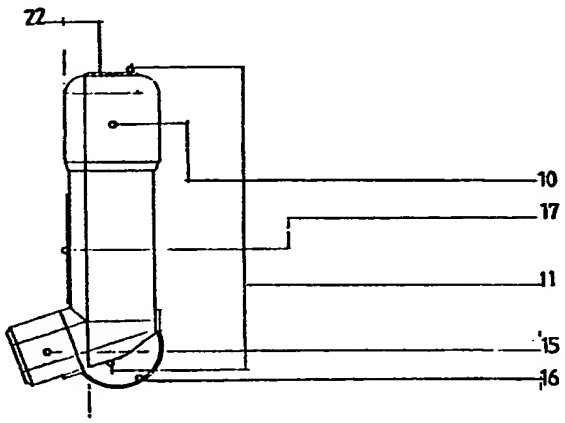


fig3



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At least one drawing originally filed was informal and the print reproduced here is taken from a later filed formal copy.

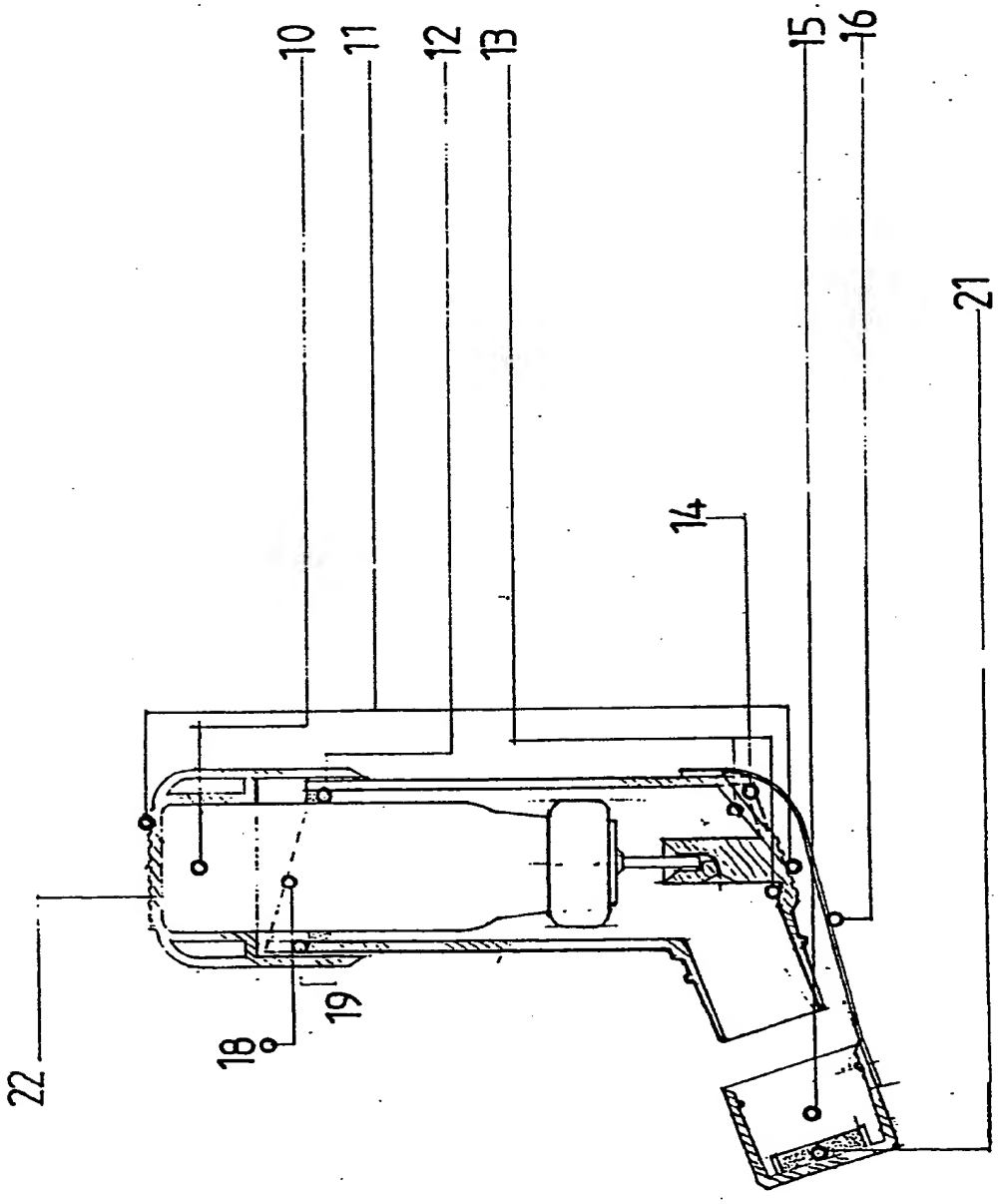

FIG 1.

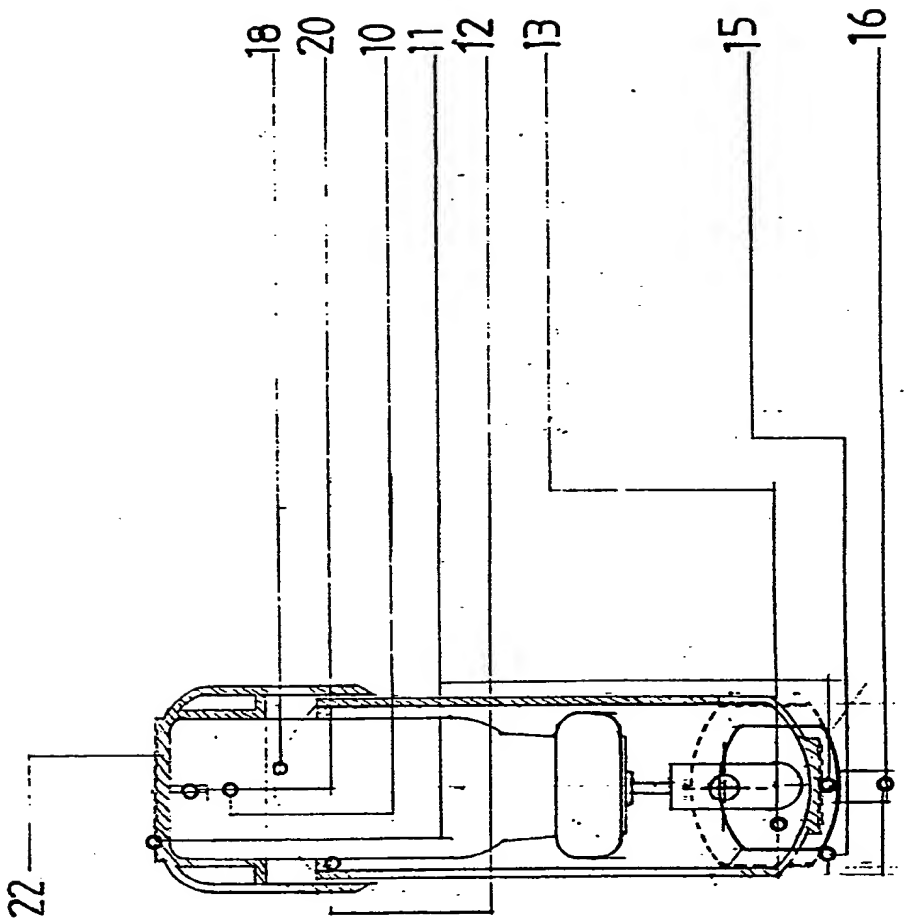

FIG 2.

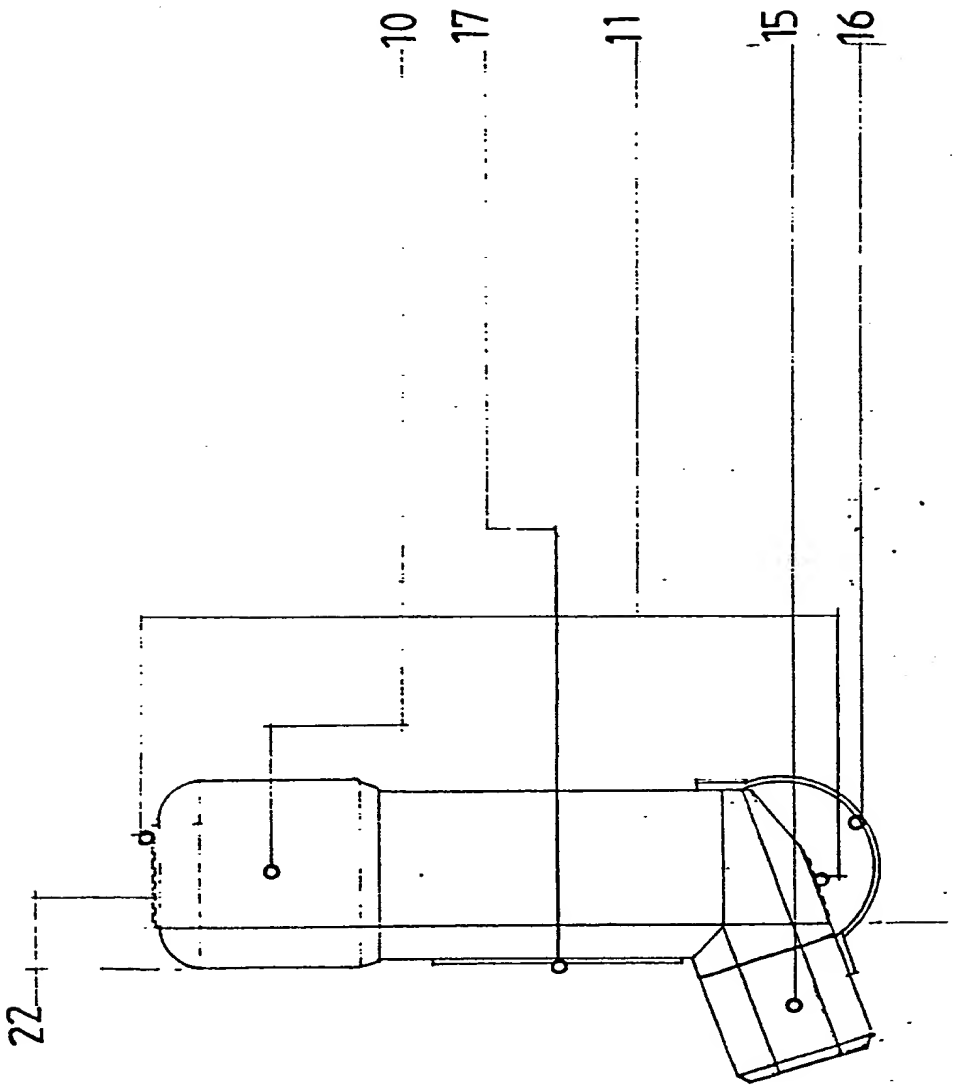

fig3

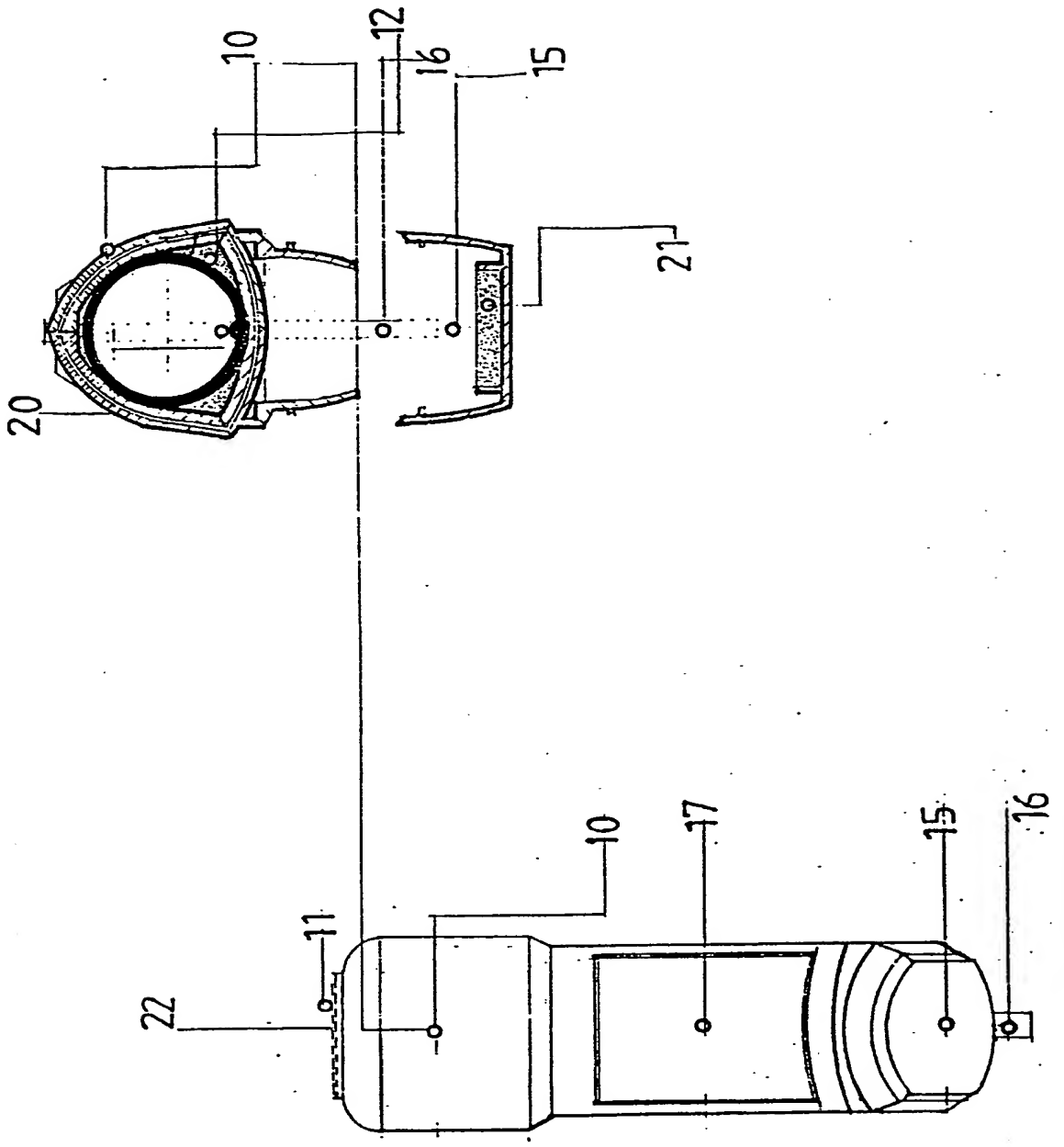

FIG4

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DUST PROOF INHALER

Technical Field

This invention relates to a Dust Proof Inhaler.

Background

Inhalers are used by people with respiratory problems all over the world. In this country they are only available by means of prescription from the National Health Service. There are several different types of inhaler. They are colour coded for the treatment of a number of illnesses.

Essential Technical Features

To operate the basic Inhaler you hold it infront of your mouth with your thumb and forefinger then press down to administer the actuation, the correct dose. When the Inhaler is empty the unit is disposible. There are also special Inhalers for children and special Inhalers for nasal use.

Example

A specific embodiment of the invention will now be described by way of example with reference to the accompanying drawings.

Fig.1 Shows a typical side section a:a
Fig.2 Shows a typical front section b:b
Fig.3 Illustrates a side elevation
Fig.4 Shows the front elevation and plan.

Referring to the drawings the basic Inhaler is improved. The invention is shown on the drawings illustrated around the existing Inhaler. Figs 1,2,3 & 4 from items 10 - 22.

In order to keep the inhaler dust proof the invented cap is to push onto the pressurised can 10 Fig 1. The design is to fit around the existing Inhaler shown 10 on Fig 3.

Thumb and finger grips shown 11 on Figs 1,2,3 & 4 are to be as shown to give adequate grip for the user in different circumstances.

New dust proof stops to eliminate the chance of dust penetration shown 12 on Figs 1,2,3 & 4 to enable the user to keep clear from dust in a dusty atmosphere (when enclosed).

Anti dust slopes 13 Fig 1,4 to allow any dust and dirt particles that may penetrate through to interior whilst inhaler is in use to slip out easily.

Item 14 shows dotted lines that are the existing Inhaler parts to be omitted from the new invention to allow for the new anti dust slopes to be incorporated.

The new improved dust cap snap shut type 15 Fig 1,2,3 & 4 shown with cap closed Fig 3,4. Fig 1,4 shows cap open and snap shut details. Also Fig 4 plan shows cap snap shut details.

New anti loose strap 16 shown in Figs 1,2,3, & 4 Fig 1 shows fully extended strap. Fig 2 shows strap retracted. Fig 4 shows front elevation view of strap when it is retracted the anti loose strap will not separate from the main body.

The location of the logo will be necessary Fig 4, 3.

New line of existing Inhaler 18 Fig 2, 1 shown by means of a dotted line. These parts are to be omitted from the new invention.

Reduced level shown 19 Fig 1, shows the reduced level as to allow for the press down cap to operate correctly.

Line of existing Inhaler 18 to be compared to reduced level 19.

Key on pressurised can 20 to be added Fig 4 plan. Fig 2 shows frontal location of the key. The new key is to be moulded into the cap or pressed into the can to reduce the risk of twisting.

Anti dust foam dust stops 21 shown Fig 1,4 to reduce the risk of dust penetration into the interior of the Inhaler.

Press down action for the new press down cap shown on Figs 1, 2, 3 & 4 illustrates the cap fitting onto the existing cannister. The function remains the same as before but incorporating the cap over as to protect against dust and dirt particles entering the dose administration area in the interior of the Inhaler. The press down cap also has thumb- and finger grips for good firm use.

CLAIMS

1. A new Industrial Dust Proof Inhaler is for use in dusty conditions in an industrial background as to allow the patient less risk of foreign bodies entering the respiratory track by means of the inhaler not having enough anti dust measures.

2. A new Industrial Dust Proof Inhaler as claimed in claim 1 is an invention to keep the Inhaler sealed against dust penetration whilst being kept on the person in a dusty or dirty pocket or bag. The Inhaler will achieve this by means of foam dust stops in areas of vulnerability.

3. The new Industrial Inhaler as claimed in claim 2 can also be left open by accident and still allow (if held vertically) dust to slip out of the dose administration chamber by means of a slip slope with no corners on low areas for dust to collect. The dust or dirt particles will fall out more efficiently.

4. The new Industrial Dust Proof Inhaler as claimed in claim 3 can, if the cap should come off, enable the user not to loose the cap. This is by means of an anti loose strap and snap shut action for the cap to secure more efficiently.

5. The new Industrial Dust Proof Inhaler as claimed in claim 2 eliminates dust penetration by means of a press down cap keyed onto existing cannister to cover existing open area as not to allow dust to filter into dose adminstration chamber.

6. The new Industrial Dust Proof Inhaler as substantially described herein with reference to figs 1, 4 of the accompanying drawings.

Patents Act 1977
Examiner's report to the Comptroller under Section 17 (The Search Report)

Application number

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Relevant Technical fields

(i) UK Cl (Edition L) A5T (TBA, TBC, TBD, TBE, TDC, TDP, TEB)

(ii) Int Cl (Edition 5) A61M; A62B

Search Examiner

M SIDDIQUE

Databases (see over)

(i) UK Patent Office

(ii) ONLINE DATABASE: WPI

Date of Search

23 JUNE 1993

Documents considered relevant following a search in respect of claims 1-6

Category (see over)	Identity of document and relevant passages	Relevant to claim(s)
X,Y	GB 1587847 (CHESEBROUGH-POND'S) Page 4 lines 10-22, dust trapping foam 54	X: 1 Y: 2
X,Y	GB 1489585 (GUICHARD) Page 1 lines 15-20, 24-26; page 2 lines 8-17, 22-27 etc. portable aerosol inhaler with air filter 7	X: 1 Y: 2
X	GB 1030772 (GORMAN) Page 1 lines 9-34; page 2 lines 58-60, 124-126	1, 4

Category	Identity of document and relevant passages	Relevant to claim(s)

Categories of documents

X: Document indicating lack of novelty or of inventive step.

Y: Document indicating lack of inventive step if combined with one or more other documents of the same category.

A: Document indicating technological background and/or state of the art.

P: Document published on or after the declared priority date but before the filing date of the present application.

E: Patent document published on or after, but with priority date earlier than, the filing date of the present application.

&: Member of the same patent family, corresponding document.

Databases: The UK Patent Office database comprises classified collections of GB, EP, WO and US patent specifications as outlined periodically in the Official Journal (Patents). The on-line databases considered for search are also listed periodically in the Official Journal (Patents).